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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/646,106	08/21/2003	Daniel A. Marx	MarxDan P-301	8432
25686	7590	06/21/2005	EXAMINER	
CARGILL & ASSOCIATES, P.L.L.C. 56 MACOMB PLACE MT. CLEMENS, MI 48043			SELF, SHELLEY M	
			ART UNIT	PAPER NUMBER
			3725	

DATE MAILED: 06/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/646,106		MARX, DANIEL A.	
	Examiner		Art Unit	
	Shelley Self		3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/16/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: *11, 13, 23, 51, 52, 53, 54, 57, 58, 59, & 60*.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, *the rake angle between 5° and 25°* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Drawings 12 and 13, illustrate reference characters 88 and 89 depicting different components of the drawings, correction is required. Additionally, page 11, lines 15, 21 and 22 define reference character 88 to be a “horizontal splitting surface”, “horizontal component” and “wedge surface angle”. Correction is required

All of the drawings should be reviewed for clarity and proper illustration and correlation of all references characters within the drawings to definitions in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the examiner does not

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accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

Page 3, line 8, "*It would of special*" should be **—It would be of special—**

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Neither the specification nor the drawings provide support for a "*splitting wedge about 12 inches tall*".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bradley (4,679,607) in view of Basta (6,318,929). With regard to claims 1 and 2, Bradley discloses a bi-direction log splitter, comprising: a trailerable (col. 5, lines 26, 27; col. 10, lines 9-14)) wheeled frame (fig. 4) having a main beam (12) along its longitudinal axis with an upper surface (fig. 4) for supporting a log thereon (fig. 4); an equal force hydraulic double acting log splitting cylinder (50) horizontally oriented on said frame, wherein the extension force is substantially equal to the retraction force of the cylinder; at least two stationary splitting wedges (24, 26, 92, 94) permanently secured to the upper surface of the frame (fig. 1, 2, 4), said splitting wedges having the wedges facing toward each other and being oriented horizontally for applying pressure to the logs that are urged thereagainst and being arranged to split logs (col. 7, lines 56-68 to col. 8, lines 1-6); and a bi-directional horizontally moveable hydraulic ram (28, 44, 56) attached to the hydraulic cylinder (50) for movement in both directions between the at least two splitting wedges (figs. 1, 2, 4), and depending on which direction the cylinder is directed, said ram advances the logs (62) toward each of the between the splitting wedges (24, 26, 94, 96) in order to effect log splitting in both directions. Bradley does not disclose a pair of bi-directional cylinders.

It would have been obvious at the time of the invention to one having ordinary skill in the art to replace, Bradley's single double acting bi-direction cylinder with a pair of cylinders because mere duplication of essential working components of an invention does not in itself warrant patentability and further involves only routine skill in the art. See *St. Regis Paper Co. v. Bemis Col*, 193 USPQ 8.

Moreover, Basta teaches that reciprocal movement of an element in a mechanical device can be actuated via several mechanical expedients (pneumatic cylinders, push/pull rods, single, double acting cylinders, etc). Further Basta specifically teaches that opposing single acting hydraulic cylinders can replace a single double acting cylinder for the purposes of extending and retracting, i.e. reciprocating with the same or equal forces (col. 6, 47-54). Because the references are concerned with a similar problem (i.e., equal force application for efficient extension/retraction of a cylinder or reciprocal movement of a cylinder) it would have been obvious at the time of the invention to one having ordinary skill in the art to replace, Bradley's single double acting cylinder with a pair of opposing cylinders so as to allow efficient reciprocation of the ram as taught by Basta.

With regard to claim 3 as best as can be seen, Bradley does not disclose the splitting wedges having a rake angle between 5° - 25° . It would have been obvious at the time of the invention to one having ordinary skill in the art to provide Bradley with splitting wedges having a rake angle between 5° - 25° , because wherein the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re Aller*, 105 USPQ 233.

With regard to claim 4 as best as can be understood, Bradley does not disclose the splitting wedges to be about 12 inches tall. It would have been obvious at the time of the invention to one having ordinary skill in the art to construct Bradley having splitting wedges of about 12 inches tall, because discovering an optimum value of a result effective variable involves only routine skill in the art. See *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPQ 1980).

Furthermore, with regard to claims 3 and 4 Applicant has neither stated nor illustrated any criticality associated with the rank angle or height of the splitting wedges, accordingly, such selection would involve routine engineering and design experimentation and therefore would be obvious to the skilled artisan.

With regard to claim 7, Bradley discloses a skid plate (28). Examiner notes the linear planar surface of impelling block (28) upon which the log (62) is aligned during splitting serves as a skid plate.

Allowable Subject Matter

Claims 5 and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose or fairly suggest *at least a pair of guide rods or a pair of guide tubes* as set forth in claims 5 and 6. As noted above, Bradley discloses a bi-directional log splitter (10) wherein a double acting cylinder (50) is actuated via a motor to reciprocate a ram (28, 44) between two opposing splitting wedges (24, 26, 94, 96). Further Bradley shows that a log (62) is placed in a space between the ram (28, 44) and either of the splitting wedges such that during operation the log (62) is moved toward a corresponding wedge for splitting.

Subsequently, a second log is placed in the location opposite the initial log and a second log can then be moved opposite the first log for splitting. Bradley discloses guides (30) for orienting a log (62) and preventing pivotal movement of the log (62) prior to and during splitting of the log.

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prior to and during splitting of the log. Bradley is silent to guide rods or tubes. Accordingly Bradley fails to anticipate or render obvious the claimed invention as set forth in claims 5 and 6.

Neither the references of record nor any combination thereof discloses the claimed invention as set forth in claims 5 and 6. Accordingly claims 5 and 6 contain allowable subject matter.

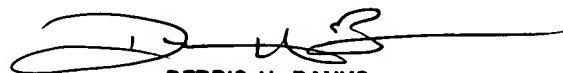
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shelley Self whose telephone number is (571) 272-4524. The examiner can normally be reached Mon-Fri from 8:30am to 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's Supervisor, Derris Banks can be reached at (571) 272-4419. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIE or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SSelf

June 13, 2005



DERRIS H. BANKS

SUPERVISORY PATENT EXAMINER

TECHNOLOGY CENTER 3700